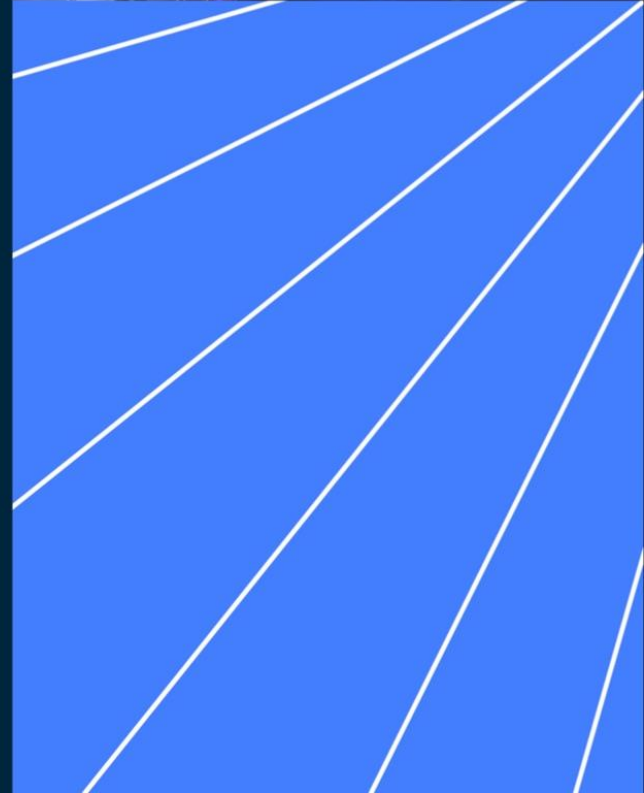


Java Training

Workstation Setup Guide

DataBank IMX

January 12, 2024



Setting Up Your Workstation for Java Development

Performing Java development requires a few components to be installed on your workstation. You can, of course, install whatever IDE you prefer, but I will be teaching the class using Visual Studio Code (a popular open-source IDE) and other convenience tools that you may find useful. If you want to set up your development environment similar to mine, the instructions below will walk you through the setup process. If you're following these steps, it is best to do them in the order presented.

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Prerequisites

Prior to any of the steps listed below, please complete all tasks in the guide titled:

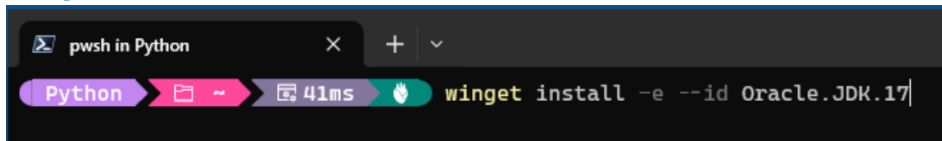
[Setting Up Your Workstation for Development Training.pdf](#)

Install the Java Development Kit (JDK)

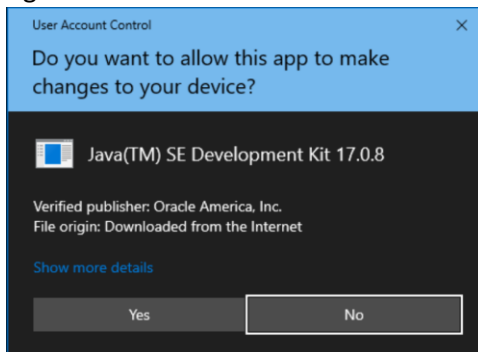
Before we can write and execute Java, we need to install the Java Developer Kit. The current version of the JDK is 20, but we will use JDK v17, as there are occasional problems accessing the JDK 20 installer. This is compatible with the code examples we'll use in the course.

1. In the terminal, enter the following command

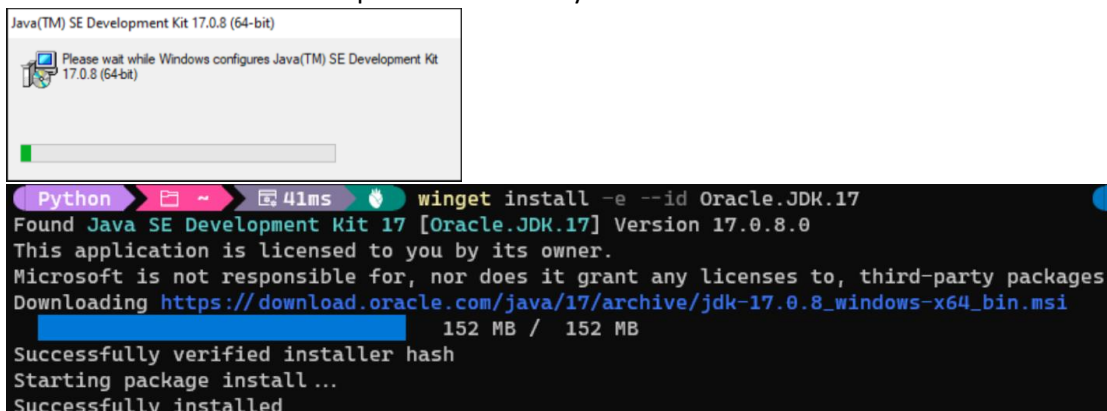
```
winget install Oracle.JDK.17
```



2. Agree to the UAC alert



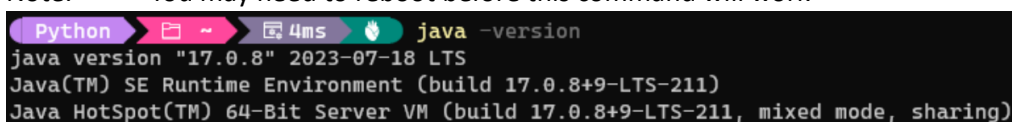
3. The installer will run and complete automatically



4. To verify that you have Python installed, enter the following in the terminal:

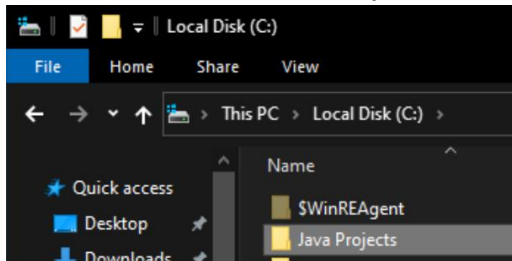
```
java -version
```

Note: You may need to reboot before this command will work



Customize Visual Studio Code

1. Create a folder called “Java Projects.” I created mine on the C: root.

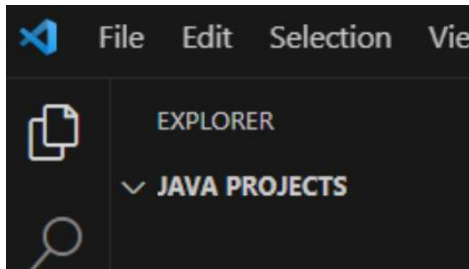


2. In the terminal, navigate to the folder you created and enter the following command
`code .`

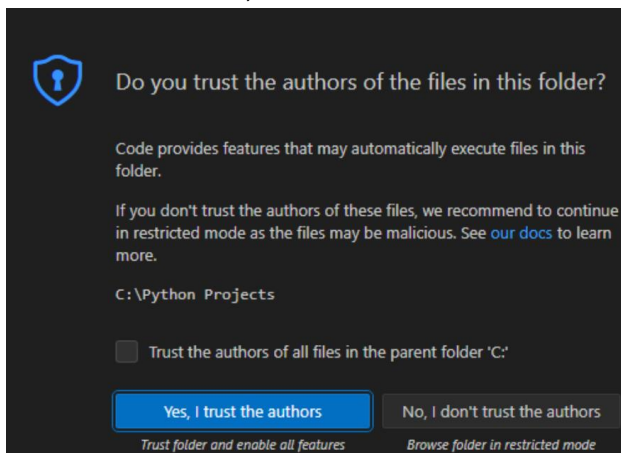


Note: You may have to reboot to update your system paths before this command will work

3. Visual Studio Code will automatically launch in your project folder



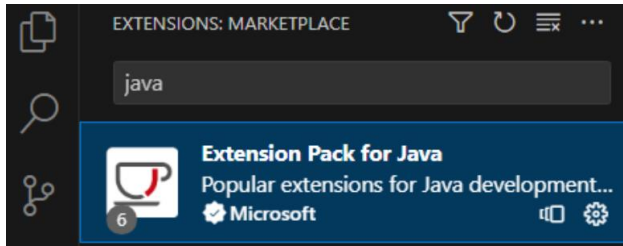
4. You can choose “Yes, I trust the authors” to allow VS Code to trust your project folder.



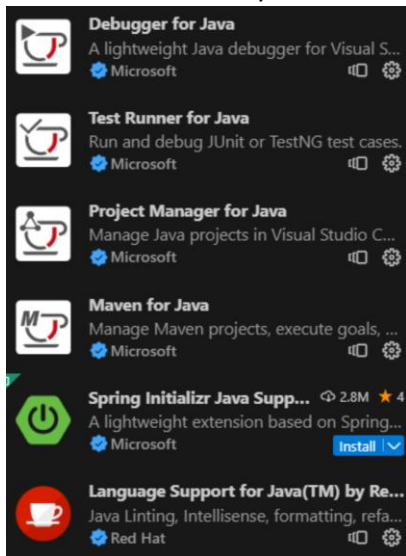
- Click on the “extensions” icon on the sidebar



- Search for “java” and install the “Extension Pack for Java”

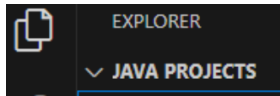


- This also installs the “Language Support for Java,” “Debugger for Java,” “Maven for Java,” “Project Manager for Java,” and “Test Runner for Java” components. You can install other add-ons if desired, but those are the only ones we need to get started with Java coding.

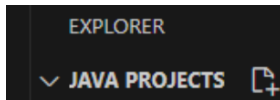


Create a Test Program

8. Click on the “explorer” icon on the sidebar



9. Click on the “new file” icon in the explorer

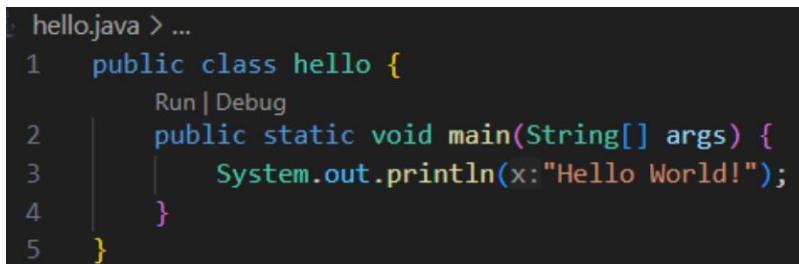


10. Title your file “hello.java”

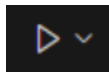


11. Enter the following code

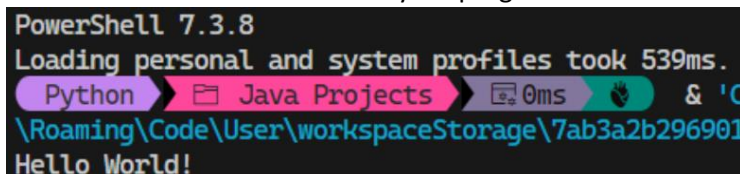
```
public class hello {  
    public static void main(String[] args) {  
        System.out.println("Hello World!");  
    }  
}
```



12. Click the “Run” icon on the toolbar



13. The terminal will launch and run your program. You will see “Hello World!” in the terminal



Clone the Java Training Repository

Finally, you'll need to clone a copy of the repository to work with.

I have two different locations where this repository is stored:

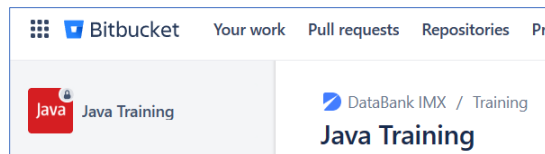
- Bitbucket: <https://bitbucket.org/databankimx/java-training>
- GitHub: <https://github.com/ZeroKlu/java-training>

1. For access to either repository, email smclean@databankimx.com to request access.

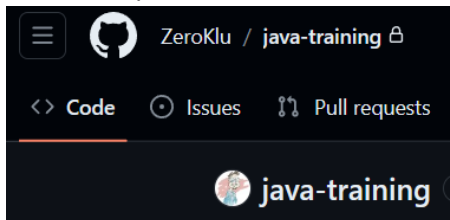
Be sure to indicate whether you need access to Bitbucket or GitHub and provide the username you use on the selected source control system.

2. In a browser, navigate to the repository you selected and make sure you have access:

- a. In Bitbucket, you should see this:



- b. In GitHub, you should see this:



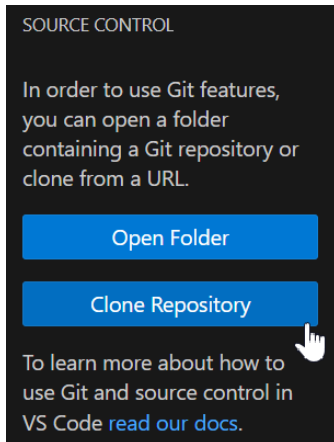
3. Right-click the VS Code icon and select "New Window" to launch an empty instance of VS Code



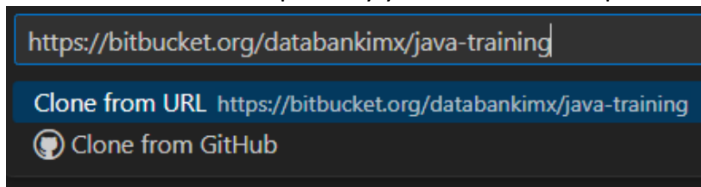
4. Click the Source Control icon on the sidebar



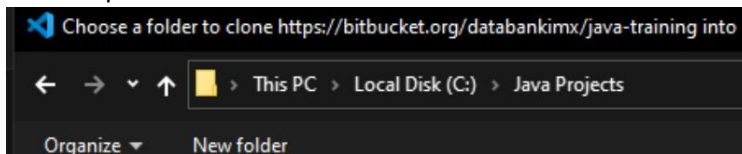
- Click the button labeled “Clone Repository”



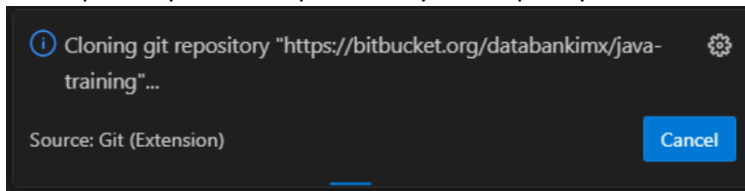
- Enter the URL to the repository you selected in step 1



- Select a path

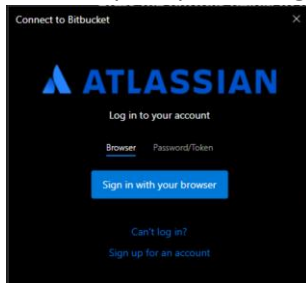


- The repository will be copied locally to the path you selected

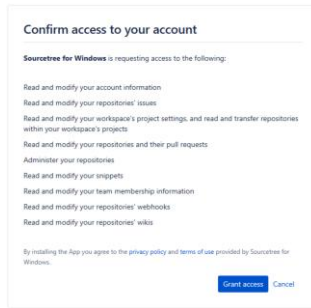


- If you used the GitHub repository, skip to step 14

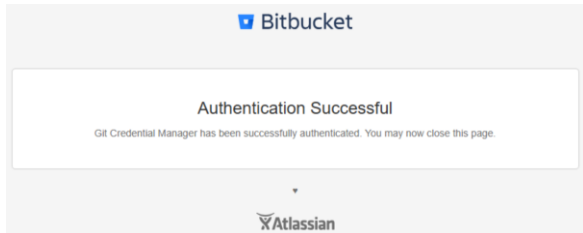
- You'll be prompted to log in again



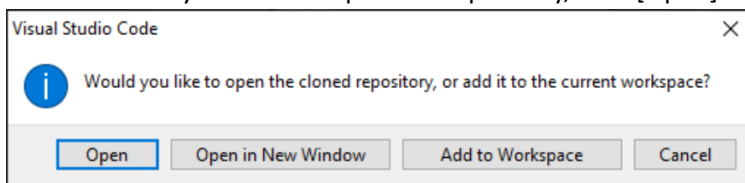
11. Grant access again in the web page that opens



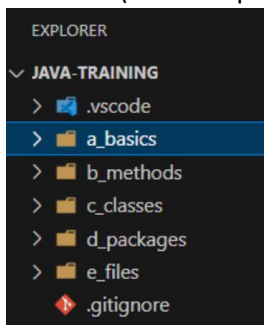
12. You'll see a success alert. After this, you can close the browser



13. When asked if you want to open the repository, click [Open]

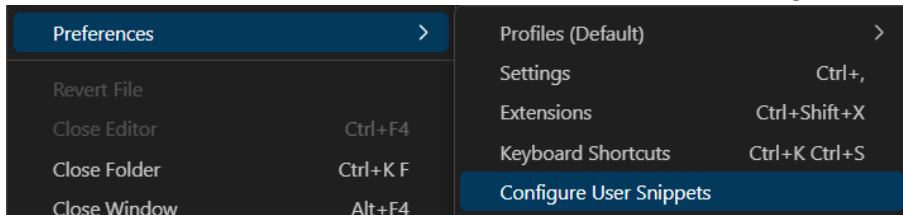


14. The repository will open, and you should see a number of folders containing sample code from the textbook (with samples and commentary from me).

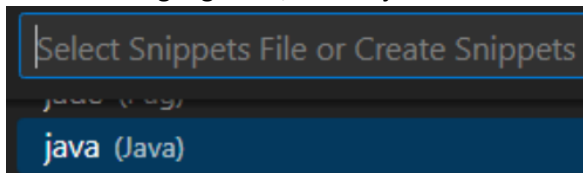


Import Snippets (optional)

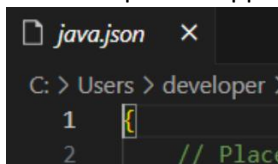
1. In VS Code, under the “File” menu, click on “Preferences” > “Configure User Snippets”



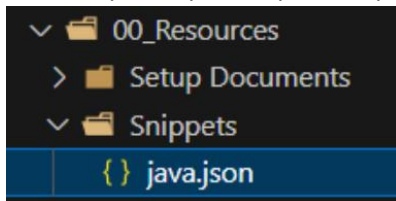
2. From the languages list, select “java”



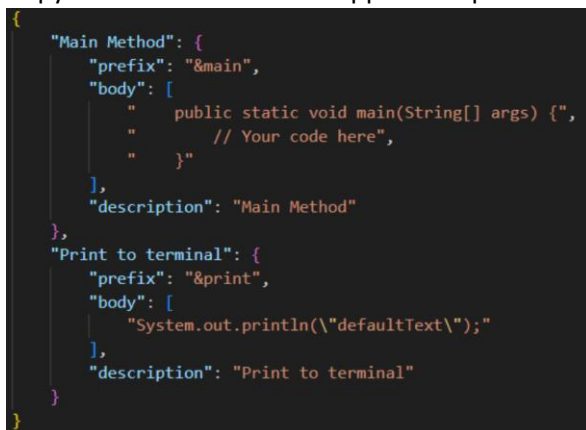
3. This will open a snippets file called java.json



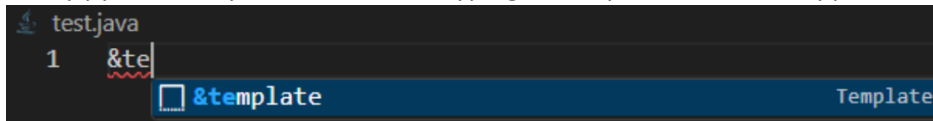
4. In the explorer pane, open the provided file “java.json”



5. Copy the content into the snippet file opened in step 3, then save the file.

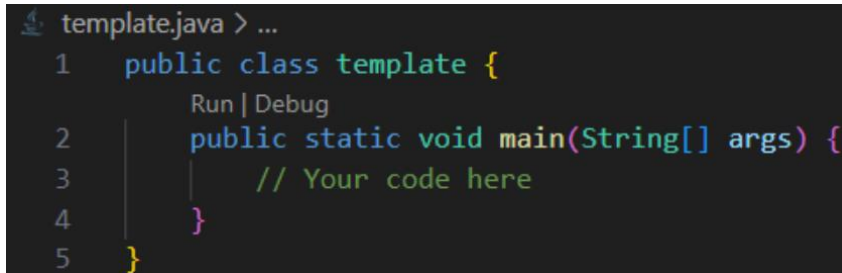


6. In any python file, you can now start typing “&template” and the snippet will be available.



The screenshot shows a code editor with a file named 'test.java'. On line 1, the text '&te' is entered. A dropdown menu is visible, showing a snippet icon followed by '&template' and the label 'Template'.

7. Once you select the snippet, the following template code will be added to your file



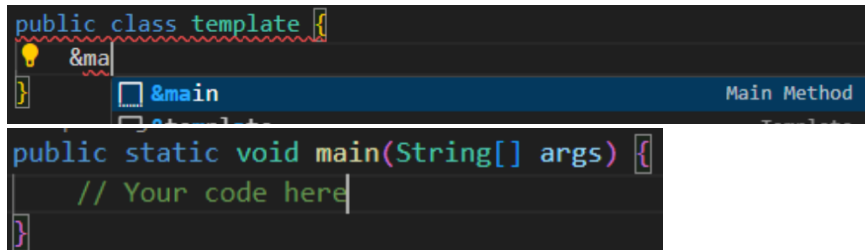
The screenshot shows the code editor after selecting the snippet. The code is as follows:

```
1 public class template {  
    Run | Debug  
2     public static void main(String[] args) {  
3         // Your code here  
4     }  
5 }
```

Note: You'll have to modify the class name to match your file

8. The java.json file also includes two additional snippets

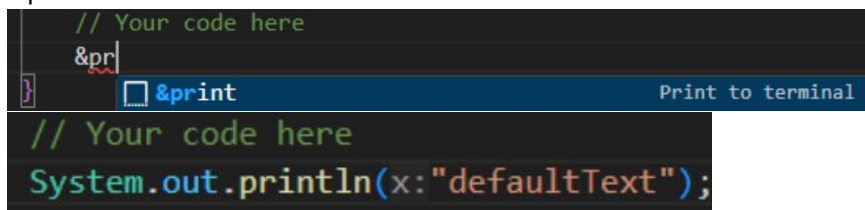
- a. &main



The screenshot shows two parts of the IDE. The top part shows a snippet suggestion for '&main' with the label 'Main Method'. The bottom part shows the expanded code:

```
public static void main(String[] args) {  
    // Your code here  
}
```

- b. &print



The screenshot shows two parts of the IDE. The top part shows a snippet suggestion for '&print' with the label 'Print to terminal'. The bottom part shows the expanded code:

```
// Your code here  
System.out.println(x:"defaultText");
```

Congratulations! Your system is set up for Java training.

Happy Coding!